

July 10, 2012

Honorable Julius Genachowski Chairman Federal Communications Commission 445 12th Street SW Washington, D.C. 20554

RE: Ex Parte Communication – In the Matter of Applications of Cellco Partnership d/b/a Verizon Wireless, SpectrumCo, LLC, and Cox TMI Wireless, LLC for Consent to Assign Licenses Held by SpectrumCo LLC and by Cox TMI Wireless, LLC, WT Docket No. 12-4; and Applications of Cellco Partnership d/b/a Verizon Wireless and T-Mobile Licenses LLC, WT Docket No. 12-175

## Dear Chairman Genachowski:

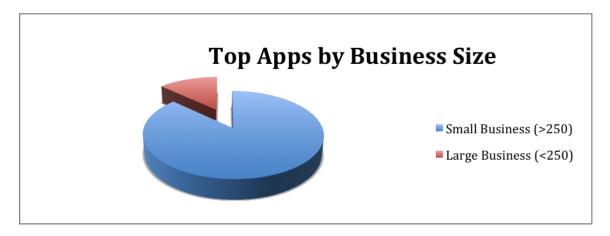
I write today representing thousands of app developers in support of the FCC's continued efforts to make more spectrum available for mobile broadband, such as the proposed AWS-4 rulemaking, incentive auctions and secondary spectrum markets. In that vein, I write in support of Verizon Wireless's application to purchase 20Mhz of Advanced Wireless Services (AWS) spectrum from a consortium of cable companies and the Verizon Wireless and T-Mobile spectrum swap contingent on those purchases. Continued build-out of wireless capacity is crucial for continued growth of wireless internet and data services as well as overall economic growth.

The Association for Competitive Technology (ACT) is an international advocacy and education organization for developers of software applications and IT services. Our members include the small technology developers creating the types of innovative mobile applications that have put America at the forefront of the mobile internet revolution. We represent over 5,000 small and mid-size IT firms throughout the world and advocate for public policies that help our members leverage their intellectual assets to raise capital, create jobs and innovate. ACT was started by a small group of information technology entrepreneurs who felt their interests were not being represented in government. Today, ACT is still run by entrepreneurs from the industry who intimately understand how the regulatory environment affects business decision-making and strategy.

Mobile app developers are part of a brand new marketplace that didn't even exist four

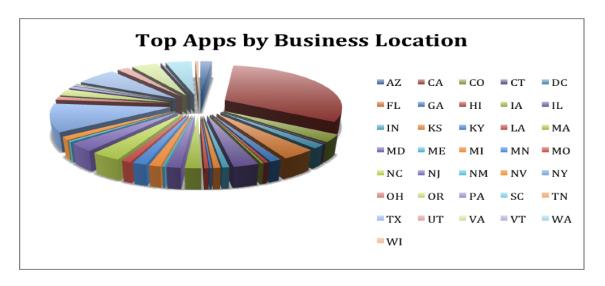
years ago. It is now a \$20 billion industry, which the United States currently leads. And the mobile app economy is primarily comprised of small businesses. Even the most successful apps are nimble small companies. The photo app Instagram that was recently acquired by Facebook for \$1 billion has only twelve employees. Unlike the traditional software industry, the small businesses that comprise the mobile apps industry are not concentrated in California or other traditional technology centers, but are located throughout the country.

ACT conducted surveys of its membership and analyzed the 500 top-selling apps in 2011. Its review of the top 500 best selling mobile applications shows that over 85% are written by small businesses; in a majority of cases, micro businesses with less than 10 employees.



Furthermore, app developers are not just in California. During the dotcom boom of the 1990s, the majority of growth occurred in Silicon Valley while the rest of the country did not reap all of the benefits of the economic boom. Conversely, the recent growth of the mobile apps industry has led to job creation all across the United States. While California continues to have a large representation of app developers, nearly 70% of the businesses are located outside of the state of California. The independent nature of this burgeoning industry allows developers to live almost anywhere.

For example, ACT member Dan Russell Pinson, creator of award-winning, highly successful educational apps like Stack the States and Monster Physics, works out of his home in Charlotte, North Carolina. ACT member Permafrost Gaming is based in Tulsa, Oklahoma, and the co-founders of ACT member Chalk, LLC, a contract mobile app builder, live in Moorhead, Minnesota and Arlington, Virginia, and one of its employees lives in Fargo, South Dakota. Mindy and David Douglas, the principals of up-and-coming educational app developer Software Smoothie, create their apps from Birmingham, Alabama. We believe that the emerging mobile internet marketplace has helped to allow creative developers to make great innovative apps from anywhere.



The mobile apps market is not just a great equalizing force for developers, but for consumers as well. Pew Research has found that minority cell phone owners are significantly more likely than whites to use most non-voice data applications on their mobile devices. In fact, when smartphone penetration is compared with desktop computers in the home, it's clear that minority communities are embracing smartphones as their primary source of internet connectivity.

Beyond the "digital divide" developers are taking advantage of the opportunities provided by mobile media to create innovative educational programs. For example ACT member PicPocket books, based in Silver Spring, Maryland, was founded to help children learn to read by creating applications that act like picture books, with audio narration, word highlighting and other interactive features that can help kids not just learn to read, but LOVE to read. PicPocket has also created an app to help parents and caregivers with step-by-step instructions for dealing with emergency situations with infants, where a mobile app may prove more useful than a book on the shelf or desktop internet information.

Smartphones and wireless internet availability have enabled the creation of incredible innovations, which touch all areas of the economy. Businesses and consumers have benefitted from a revolution in logistics as shippers can locate any package in transit, doctors can remotely monitor their patients' health through mobile apps such as Airstrip; IT workers can remotely monitor the health of business networks; employees can participate in online business meetings, and students and professors can take part in online discussions, all wirelessly. Documents can now be stored and accessed from "the cloud", with availability anywhere there is a mobile signal. And people can now access entertainment and news media anywhere at anytime. But all of these applications require wireless bandwidth dependent on increasingly congested spectrum.

Our developers have not stopped innovating, and neither have the devices we run on. Improved mobile device resolution and increased wireless speeds will pose new

challenges for app developers rooted in scarce spectrum. For example, Apple's iPad3 has what it calls its "Retina" display with a greatly improved graphics resolution capable of delivering high definition entertainment and gaming content to consumers. Apple's competitors can be expected to follow suit. And rollout of LTE and other 4G wireless capabilities will improve the speed at which users can consume video and other data-intensive content, including data contained in cloud services to make productivity applications more useful. These advancements will provide new opportunities for app developers to create innovative new apps to utilize these new capabilities.

However, the very act of finding new, innovative ways to utilize new screen resolutions creates serious bandwidth challenges. For example, apps created for the iPad3 must contain graphics with a much higher resolution than previous generations. This will result in larger graphic files, nearly doubling the overall size of many apps. In order to limit the wireless bandwidth consumed by purchasing apps from Apple's App Store, apps over 50MB in size can only be purchased through a WiFi connection, not through 3G or LTE networks. This is an increase from the 20MB limitation just a few months ago, and reflects the more data intensive requirements of the latest devices. The increased resolution will make it more difficult for developers of feature-rich or graphic-intensive apps to stay under the 50MB threshold. Studies have shown that eliminating consumers' ability to buy apps over 3G or LTE networks depresses sales by 40%. The need for this limitation could be obviated by increasing the spectrum deployed by wireless carriers.

As faster 4G wireless networks are rolled out, the spectrum shortage will only get worse. It has been estimated that in 2011, the average 4G connection generated 28 times more traffic than the average non-4G connection. Mobile data traffic is further expected to increase 18-fold between 2011 and 2016. Continued innovation will make spectrum use more efficient, but also increase demand for ever-more spectrum. While app developers have cheered the recent legislation authorizing spectrum incentive auctions and more unlicensed spectrum, new and existing spectrum <u>must</u> be administered in the most effective way possible.

Limited spectrum is already hurting the market for data-rich applications. While the largest wireless carriers are increasing network capacity, some have also responded to the increased demand for data usage and scarce spectrum through tiered pricing and caps on data. While ACT does not express any opinion on tiered pricing plans, the fact that most people cannot purchase plans for wireless data usage above the implemented caps is limiting the ability of app developers to create innovative applications that might require heavy wireless data usage.

For that reason ACT fully supports the Commission's efforts to speed the availability of spectrum for mobile broadband. We urge the Commission, for example, to move quickly to promote further deployment of mobile broadband in the 2 GHz band. See Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz

Bands, WT Docket No. 12-70, ET Docket No. 10-142, WT Docket No. 04-356, Notice of Proposed Rulemaking Notice of Proposed Rulemaking and Notice of Inquiry, FCC 12-32 (2012). And we commend the Commission's stated intention to move forward this year with rulemakings to implement the incentive auction legislation.

The opportunities our members, and the larger ecosystem, see will be dashed if we do not find a way to <u>quickly</u> move additional spectrum into use. Therefore transactions like Verizon's proposed acquisition of spectrum from the cable company consortium and its proposed public sale of its Lower 700 MHz A & B band spectrum are needed today. Spectrum must be in the hands of those best able to make it available to the market, and a healthy secondary market in spectrum will make that spectrum useful more quickly. The proposed AWS spectrum swap between Verizon and T-Mobile is a perfect example of carriers turning to the secondary market to fill each carrier's unique needs. The large wireless carriers have invested many billions in improving their networks, and we need them to continue to do so. When available usable spectrum is the bottleneck limiting continued growth in mobile data traffic, then this needed investment is stifled.

We applaud your efforts and leadership in making wireless spectrum more available through the President's National Wireless Initiative. If secondary market transactions such as those proposed in these applications are not approved, however, we fear that the spectrum involved will continue to lie fallow while app developers and consumers hunger for more wireless data. Furthermore, such a decision could distort the spectrum secondary market by discouraging participation from those companies that could actually cultivate barren spectrum, leaving only the speculators. This would be contrary to the President's and your shared goal of making wireless broadband available to 98% of Americans.

ACT further urges the FCC to restrain from creating set-asides or limiting bidders in any upcoming spectrum auction. It will require massive investment to make new spectrum usable to businesses and consumers. Billions of dollars will need to be spent to hire men in hardhats, pull cable, dig trenches, and ultimately provide customer service to consumers. This enormous allocation of capital will need to be done with traditional market forces at the helm. Set-asides and bidding limitations are guaranteed to add inefficiencies to this process and ultimately slow our growth and innovation.

The United States currently enjoys a sizable competitive advantage in the global app marketplace. We are poised to experience dramatic growth, bringing jobs and investment to the U.S. economy. For the United States to continue to lead the world in innovative mobile applications, we need sufficient spectrum to accommodate the forecasted growth in data traffic. As a nation, we cannot risk sacrificing our competitive position through a failure to innovate and invest in our infrastructure. That is the surest way to squander the tremendous opportunity before us.

ACT supports FCC efforts to free up spectrum for more wireless communications and data traffic. A robust secondary market in spectrum should be an integral part of FCC plans to help the marketplace adapt to wireless data needs.

Sincerely,

Morgan Reed

**Executive Director** 

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